AMSAT News Service Weekly Bulletins
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AMSAT NEWS SERVICE
ANS-016

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:

ans-editor@amsat.org

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SB SAT @ AMSAT $ANS-016.01
Satellite Protocol

AMSAT News Service Bulletin 016.01
  From AMSAT HQ SILVER SPRING, MD.
January 16, 2011
To All RADIO AMATEURS
BID: $ANS-016.01

Recently, there has been comments on activity on the LEO satellites. With newcomers added to the mixture everyday, it is a good idea to re-read a Guideline from many years ago.

http://www.innismir.net/article/26

Enjoy and use as a reminder of our resposibilities.

[ANS thanks Drew, KO4MA, for the above information]

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SB SAT @ AMSAT $ANS-016.02
ARISSat-1 Update

AMSAT News Service Bulletin 016.02
  From AMSAT HQ SILVER SPRING, MD.
January 16, 2011
To All RADIO AMATEURS
BID: $ANS-016.02

The ARISSat-1 satellite/amateur radio experiment is in Baikonur. RSC Energia has information and photographs about the satellite on their news site:

http://www.energia.ru/en/news/news-2010/news_12-31.html

The NASA Phase 3 Safety Review for ARISSat is scheduled for Thurs-
day 20 January 2011. The Progress 41P launch carrying ARISSat-1/
RadioSkaf-V is scheduled for late January and the release of the sat-
ellite is scheduled for the end of February 2011.

Energia is also calling the satellite KEDR, after Yuri Gagarin's call
sign in celebration of the 50th anniversary of the first manned space
flight 12 April 1961. Sergey Samburov, RV3DR is shown in the photos
with the satellite on the RSC Energia site.

[ANS thanks ARISSat-1 Project Manager Gould Smith, WA4SXM, for the
above information]

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SB SAT @ AMSAT $ANS-016.03
SKN reminder

AMSAT News Service Bulletin 016.03
From AMSAT HQ SILVER SPRING, MD.
January 16, 2011
To All RADIO AMATEURS
BID: $ANS-016.03

Ray, W2RS thanks all who participated in AMSAT's Straight Key Night
on OSCAR 2011 and reminds us to please nominate someone you worked
for 'Best Fist.' Your nominee need not have the best fist of those
you heard, just of those you worked. Nominations should be sent to
w2rs@amsat.org. A list of those nominated will be published in ANS
in early February, and in a forthcoming issue of The AMSAT Journal.

[ANS thanks Ray, W2RS, for the above information]

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SB SAT @ AMSAT $ANS-016.04
SA AMSAT Cubesat project needs programmers

AMSAT News Service Bulletin 016.04
From AMSAT HQ SILVER SPRING, MD.
January 16, 2011
To All RADIO AMATEURS
BID: $ANS-016.04

The development team for the planned South African CubeSat project
is taking shape nicely.

Radio amateurs with diverse specialist skills are offering their
expertise from all over. "However, we still need a person with
experience in programming PIC or 8051 microprocessors," Hannes
Coetzee, ZS6BZP, told SARL News.

"This person will be a critical member of the team and will be
responsible for the development of the onboard controller soft-
ware. Other amateurs who are interested in the development of
the satellite and would like to join the development team are
still welcome to send their Amateur Radio CVs to:
saamsat@intekom.co.za," Hannes said.

The team will meet for its first formal teleconference on Wed-

nesday evening 26 January 2011 at 20:00. Team members will re-
ceive a formal notification.

[ANS thanks SARL, SA AMSAT, and SouthGateARC site for the
 above information]

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SB SAT @ AMSAT $ANS-016.05
ARISS Report

AMSAT News Service Bulletin 016.05
  From AMSAT HQ SILVER SPRING, MD.
January 16, 2011
To All RADIO AMATEURS
BID: $ANS-016.05

Amateur Radio on the International Space Station (ARISS)
Status Report January 10, 2011

1. Upcoming School Contacts

An Amateur Radio on the International Space Station (ARISS) contact
scheduled for Tsutsujigaoka Minami Elementary School in Akishima,
Tokyo, Japan on Wednesday, January 12 was completed. Students par-
ticipating in the contact are learning about space science and the
global cooperation required to operate the ISS.

An Amateur Radio on the International Space Station (ARISS) contact
with Istituto Comprensivo Marco Polo-Viani Scuola Secondaria 1[illegible] Grado,

Viareggio, Lucca, Italy on Wednesday, January 12 has been completed.
Through this contact, the school hoped to increase students' interest
in science, technology, space research and other space-related subject
matters.

Istituto Comprensivo Via Toscana 2 in Civitavecchia, Italy scheduled
for an Amateur Radio on the International Space Station (ARISS) contact
on Saturday, January 15 has also been successful. The school, with an
enrollment of 750 children, ages 3-14, had prepared questions about life

in space and the research performed on the ISS.

2. Italian Students Chat with Astronaut through ARISS Contact

On Saturday, January 8, University of Bari "Cittadella Mediterranea
della Scienza" in Bari, Italy participated in an Amateur Radio on the
International Space Station (ARISS) contact with ESA astronaut Paolo
Nespoli, IZ0JPA. Prior to the contact, ARISS mentor Francesco De
Paolis, IK0WGF introduced the event via phone line. Nespoli made the
radio link with the students, answering 14 of their questions. A sec-
ond contact was established on the following ISS pass to finish up the
questions and exchange greetings. Approximately 100 students, teachers,
visitors and media attended. Regional television, local media and news-
papers covered the event and video was streamed over the internet, re-
ceiving more than 100 connections. Cittadella Mediterranea della Scienza

promotes technology and scientific knowledge in schools of all grades
using projects that encourage academic research.

3. Astronaut Training Status

Astronaut Chris Cassidy was given an introductory session on ARISS this

past week. He will train for his amateur radio license and plans to participate in the ARISS program. He is currently scheduled to fly in the spring of 2013.

4. ARRISat Featured in February QST

The American Radio Relay League (ARRL) posted a story in its January 6 ARRL Letter about the February issue of QST which features ARISSat-1 on its front cover. The ARRL monthly journal has a circulation of 156,000.
See: http://www.arrl.org/arrlletter?issue 11-01-06

5. AMSAT Posts ARISSat-1 Update to Web Site

The Radio Amateur Satellite Corporation (AMSAT) posted an update on its Web page covering the current status of ARISSat-1. "ARISSat-1/RadioSkaf-V Integration and Testing Underway in Moscow," may be viewed here:
http://www.amsat.org/amsat-new/index.php

6. AMSAT Articles on ARISS News

On January 9, the AMSAT (Radio Amateur Satellite Corporation) News Service bulletin (ANS-009) included two ARISS-related news items. "ARISSat-1/RadioSkaf-V Update" and "ARISS School Contacts Resume for 2011" may be found at:
http://www.amsat.org/amsat/archive/amsat-bb/48hour/msg83129.html

[ANS thanks Carol, KB3LKI, for the above information]

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SB SAT @ AMSAT $ANS-016.06
NASA Redoubling Efforts to Contact Spirit Rover on Mars

AMSAT News Service Bulletin 016.06
From AMSAT HQ SILVER SPRING, MD.
January 16, 2011
To All RADIO AMATEURS
BID: $ANS-016.06

A news item carried on UniverseToday.com (http://tinyurl.com/2ccsnku) reports that NASA is stepping up operational efforts to contact the Martian Spirit rover with more communications commands; more listening time; more frequencies. Spirit last communicated with mission controllers back on Earth on March 22, 2010. The rover entered hibernation mode, some nine months ago, as the available sunlight to power the life giving solar panels was diminishing. NASA hopes to reawaken Spirit from a long slumber and reignite her breakthrough campaign of exploration and discovery from a scientific goldmine on the surface of the red planet.

At Spirit's location in the southern hemisphere of Mars, Southern Summer has not yet arrived. Right now it's mid Southern Spring and daylight hours are increasing. And Summer doesn't even start until mid-March 2011. The question is whether Spirit's unheated electronics components have endured the extremely harsh and frigidly cold conditions of her 4th winter on Mars - her coldest ever. At about -100 C.

Spirit entered a low-power fault mode in March 2010 with minimal activity except charging and heating the batteries and keeping its clock running. With most heaters shut off, Spirit's internal temperatures dipped

lower than ever before on Mars. That stress could have caused damage, s
uch as impaired electrical connections, that would prevent reawakening
or, even if Spirit returns to operation, would reduce its capabilities.

"Components within the rover electronic module (REM) inside the rover's
warm electronic box (WEB) are experiencing record low temperatures,"
said Doug McCuistion, the director of Mars Exploration at NASA Head-
quarters in Washington, DC, in an interview about Spirit's predicament.
"The expectation is for the REM hardware to reach -55C at the coldest
part of the winter. We have tested the REM down to -55C".

NASA's Deep Space Network of antennas in California, Spain and Australia

has been listening for Spirit daily in coordination with the spacecraft
orbiting Mars; Mars Odyssey and Mars Reconnaissance Orbiter. In X-band,
the DSN listens for Spirit during one pass each day. The rover team has
also been sending commands to elicit a response from the rover even if
the rover has lost track of time.

Now, the monitoring is being increased. Additional listening periods in-
clude times when Spirit might mistake a signal from NASA's Mars Recon-
naissance Orbiter as a signal from Earth and respond to such a signal.
Commands for a beep from Spirit will be sent at additional times to
cover a wider range of times-of-day on Mars when Spirit might awaken.

"DSN does an average of 4 "sweep & beep" commands in each day's pass,"
according to JPL spokesman Guy Webster. Also, NASA is listening on a
wider range of frequencies to cover more possibilities of temperature
effects on Spirit's radio systems.

[ANS thanks UniverseToday.com for the above information]

SB SAT @ AMSAT $ANS-016.07
Satellite Shorts

AMSAT News Service Bulletin 016.07
  From AMSAT HQ SILVER SPRING, MD.
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+ The next "HV Satcom" Net is Thursday January 20 at 8PM (UTC -5);
 (Host) Mt. Beacon ARC) on the 146.970MHz. Repeater (-600;Pl;100)
 with an Echolink Node of "N2EYH-L" ("HV Satcom"net): www.hvsatcom.org/
 E-Mail: wa2aqh@amsat.org ("HV Satcom"Net)

+ January SatMagazine Covers CubeSats

  Amateur Radio satellites NanoSail-D and O/OREOS get a mention in the
  January edition of SatMagazine, now available for free download.

  NanoSail-D and O/OREOS feature on pages 61/62.

  Pages 14-18 have a article by Surrey Satellite Technologies Ltd.
  (SSTL) project lead Shaun Kenyon on the recent increase in interest
  in NanoSats and pages 20-22 cover "The Power Of Picosatellites".

  The US military are making use of NanoSats and the recently launched
  US Army satellite SMDC-ONE, a 3U CubeSat, is covered on page 60.

  Download a copy of the January SatMagazine from
  http://www.satmagazine.com/2011/SM_January_2011.pdf

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  Free subscription to SatMagazine and SatNews
  http://www.satnews.com/cgi-bin/regester.cgi

  SatMagazine
  http://www.satmagazine.com/

[ANS thanks the SouthGateARC Site and the HVSatCom Net for the above
 information]

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SB SAT @ AMSAT $ANS-016.08
AMSAT China Report on HO-68 Health

AMSAT News Service Bulletin 016.08
  From AMSAT HQ SILVER SPRING, MD.
January 16, 2011
To All RADIO AMATEURS
BID: $ANS-016.08

AMSAT China Report on HO-68 Health

HO-68 (XW-1) Project Manager, Alan Kung, BA1DU sent an update on the
satellite's operational status. Alan wrote, "This week I received
many reports from all over the world about faults of HO-68's tele-
metry beacon."

Alan continues, "After we analyzed the situation of the satellite, we
think that the software in the payload management MPU was not running
properly. Software crashes stopped communication between the payload
management MPU and the satellite management unit. This caused the prob-
lem with the beacon and caused an abnormal switch of the transponder
mode."

On January 14 AMSAT China controllers switched the satellite into safe
mode at 0300Z. They turned off most of the onboard units, and then at
0440Z re-powered up. The satellite returned to normal operating mode
and so far the beacon has continued to operate normally.

AMSAT China said they will not upload commands to the satellite to
change the transponder operating schedule for the next week. The com-
mand team will continually monitor HO-68 operational status this week.
Please send Alan a report if you observe any abnormal operation of
HO-68.
Alan can be reached at: alankung@public3.bta.net.cn

AMSAT China web page: http://www.camsat.cn

[ANS thanks Alan Kung, BA1DU for the above information]

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In addition to regular membership, AMSAT offers membership in
the President's Club. Members of the President's Club, as
sustaining donors to AMSAT Project Funds, will be eligible
to receive additional benefits. Application forms are available
from the AMSAT Office.

73,
This week's ANS Editor
Dee Interdonato, NB2F
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